



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,850	07/24/2003	Max Gottl	265-147	8936

23117 7590 05/17/2005

NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

ALEMU, EPHREM

ART UNIT PAPER NUMBER

2821

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

522

Office Action Summary	Application No.	Applicant(s)	
	10/625,850	GOTTL ET AL	
	Examiner	Art Unit	
	Ephrem Alemu	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2-16-05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The substitute specification filed 2-16-05 has been entered.

Terminal Disclaimer

2. The terminal disclaimer filed on 2/16/05 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of the full statutory term of any patent granted on pending reference Application Number 10/408,780 filed on 4/08/03 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith et al. (US 6,211,841).

The claims have been rejected in view of the newly discovered reference as follows.

Re claim 1, Smith discloses a two-dimensional antenna array (i.e., multi-band base station antenna) defining at least two vertically running gaps (i.e., columns), the antenna array comprising:

at least two radiators (i.e., high band and low band dipoles) offset to one another in the vertical direction in at least one of the gaps (i.e., in the first column) (Fig. 4),

Art Unit: 2821

the radiators (i.e., high band and low band dipoles) in the at least one gap (i.e., in the first column) except for at least one radiator (i.e., high band dipoles) being jointly supplied, and

the at least one radiator (i.e., high band dipoles) in at least one of the gaps (i.e., in the first column) being supplied jointly with the radiators (i.e., high band dipoles) of a gap adjacent to the at least one gap (i.e., in the second column) (Fig. 4; Col. 5, line 63- Col. 6, line 45).

Re claim 2, Smith further discloses the jointly supplied radiator (i.e., high band and low band dipoles) is arranged such that the vertical distance is the same at a given horizontal offset (Fig. 4; Col. 5, line 63- Col. 6, line 45).

Re claim 3, Smith further discloses the jointly supplied radiator (i.e., high band and low band dipoles) comprises plural radiators (i.e., high band and low band dipoles) arranged offset to one another in the vertical direction such that the vertical distance is substantially the same between the plural radiators (i.e., high band and low band dipoles) which are vertically offset to one another and/or are located horizontally at different heights (Fig. 4; Col. 5, line 63- Col. 6, line 45).

Re claim 4, Smith further discloses the jointly supplied radiator (i.e., high band dipoles) comprising plural radiators (i.e., high band and low band dipoles) arranged offset to one another in the vertical direction such that the vertical distance is substantially the same between two radiators (i.e., between high band and low band dipoles in the first column) which are vertically offset to one another and/or the vertical distance of the radiators (i.e., high band and low band dipoles) located horizontally at different heights (Fig. 4; Col. 5, line 63- Col. 6, line 45).

Art Unit: 2821

Re claim 5, Smith further discloses the radiators (i.e., high band and low band dipoles) are located in pairs on a common vertical line in at least two gaps (i.e., in the first and second columns) (Fig. 4).

Re claim 6, Smith further discloses the jointly supplied radiators comprises plural radiators (i.e., high band and low band dipoles) located at a regular vertical distance on top of one another including at least one radiator (i.e., high band dipoles in the first column) located with a horizontal offset to the other jointly supplied radiators in a gap (i.e., in the first column) adjacent the at least one gap (i.e., the second column) (Fig. 4; Col. 5, line 63- Col. 6, line 45).

Re claim 7, Smith further discloses defining at least two gaps (i.e., first and second columns), the radiators (i.e., high band and low band dipoles) within the at least two gaps being located at a regular vertical distance to one another and in the same vertical position in pairs, in the at least two gaps (i.e., in the first column) there being at least one pair of two radiator (i.e., high band and low band dipoles) such that one radiator (i.e., high band dipoles in the first column) which is jointly supplied and located in the at least one gap (i.e., in the first column) is jointly supplied with at least one radiator (i.e., high band dipoles in the second column) of a gap (i.e., in the second column) adjacent thereto (Fig. 4; Col. 5, line 63- Col. 6, line 45).

Re claim 8, Smith discloses a two-dimensional antenna array (i.e., multi-band base station antenna) comprising:

a structure defining at least first and second gaps (i.e., first and second columns) extending vertically when the antenna is in use (Fig. 6);

Art Unit: 2821

plural radiators (i.e., high band and low band dipoles) disposed at least partially within the first gap, the plural radiators (i.e., high band and low band dipoles in the first column) being offset from one another in the vertical direction (i.e., first column) (Fig. 6); and

at least one radiator (i.e., high band and low band dipoles) at least partially disposed within the second gap, wherein at least one of the plural radiators (i.e., high band and low band dipoles) within the first gap and the at least one radiator (i.e., high band and low band dipoles) within the second gap are jointly supplied (Fig. 6; Col. 3, lines 17-63; Col. 7, lines 4-12).

Re claim 9, Smith discloses a two-dimensional antenna array (i.e., multi-band base station antenna) comprising:

a structure defining at least first and second columns extending vertically when the antenna is in use plural radiators (i.e., high band and low band dipoles) disposed at least partially between the first column and the second column (Fig. 6),

the plural radiators (i.e., high band and low band dipoles) being offset from one another in the vertical direction (i.e., in the first or second columns) (Fig. 6; Col. 3, lines 17-63; Col. 7, lines 4-12); and

at least one further radiator (i.e., high band dipoles) at least partially disposed outside of a space (i.e., at center column) between the first column and the second column, wherein at least one of the plural radiators (i.e., high band dipoles in the first or second columns) and the at least one further radiator (i.e., high band dipoles at the center column) are jointly supplied (Fig. 6; Col. 3, lines 17-63; Col. 7, lines 4-12).

Art Unit: 2821

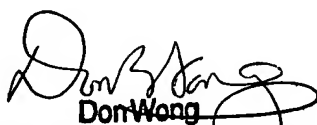
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K. Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EA
5-5-05


Don Wong
Supervisory Patent Examiner
Technology Center 2800